

## **REMARKS**

This Amendment is submitted in response to the outstanding Office Action, wherein the Examiner rejected Claims 1-10, all the claims under consideration. Reconsideration of the application in view of the amendments presented herewith and the following remarks is respectfully requested.

Initially, Applicants would like to thank the Examiner for the careful consideration given this case. Applicants have amended Claims 1 and 10 and added new Claims 17 and 18 to define their invention more clearly as shown in F16S. 1 and 2 in an effort to advance prosecution of the application.

Prior to discussing the rejections, Applicants take this opportunity to set forth the following brief remarks about their new compact bagless separation and collection device. Applicants' unique air separation and dirt collection device for a bagless vacuum cleaner includes an elongated container having a cylindrical sidewall with a closed top and a bottom with a central opening with a screen covering the opening. A central hollow tube extends the full length of the container having an outwardly and downwardly extending skirt disposed on the mid-portion of the tube. The upper portion of the center tube above the skirt being open to passage of air and with a screen covering the opening and the lower portion of the hollow tube is impervious to the passage of air. A tangential air inlet is formed in the upper portion of the sidewall opposite the open upper portion of the hollow tube. The skirt defines a separation zone above the skirt and a collection zone below the skirt.

During operation, air entering the tangential air inlet circulates above the skirt while dirt falls to the bottom of the device. Air is then drawn into the open portion of the column through the screen and is then drawn down the column through an outlet in the bottom filter cartridge due to vacuum created by a motor below. Accordingly, the circulating air is drawn into the column so that there is limited air movement below the outwardly and downwardly extending skirt. This is a unique construction as the prior art does not disclose a central hollow tube that extends the full length of the container having an outwardly and downwardly extending skirt disposed on the

mid-portion of the tube, the skirt and lower portion of the hollow tube being impervious to the passage of air.

The combination of the placement of the inlet in the upper air separation region at the level of the screen and the inclined skirt keeps the circulating air in the upper air separation portion of the device above the skirt is not shown in the art. This configuration is in marked contrast to Hitzelberger et al., the principal cited reference that teaches away by providing a prefilter with holes to promote air flow below the prefilter in the collection region of the dirt cup and then upwardly through the filter. Thus, Applicants are entitled to a claim to their air separation and dirt collection device as now set forth more clearly in amended independent Claims 1 and 10 and new Claim 17. No new matter has been added by these amendments.

**Rejection Based On Hitzelberger Under 35 U.S.C. § 102(e)**

The Examiner rejected Claims 1-3, 5-9 and 10 under 35 U.S.C. § 102 (e) as being anticipated by U.S. Published Application No. 2004/0010885 to Hitzelberger et al. ("Hitzelberger"). Applicants respectfully traverse this rejection for the following reasons.

For a rejection to be sustained under 35 U.S.C. § 102 (e) each and every element of the claimed invention must be disclosed in the single cited prior art reference. In this case, Hitzelberger discloses a dirt container for cyclonic cleaner with air entering tangentially along the top of the sidewall of a collection chamber having a central column. The airstream flows downward in the container and through a gap between the outer edge of a horizontal prefilter and the sidewall to the bottom wall of the container. Here, the heavier dirt and debris collects in the annular portion of the collection chamber beneath the prefilter on the bottom. Then, the airstream passes upwardly in the collection chamber passes through the holes in the prefilter towards a pleated filter fitted on the upper portion of the column. The airstream then passes downwardly through the column and out the discharge port. See Hitzelberger at Paragraphs [0028] and [0029].

Applicants respectfully submit that this teaching in Hitzelberger does not show their dirt cup as claimed and actually teaches away from Applicants' separation and collection device.

Applicants disclose and now claim more clearly a dirt cup including an inlet in the mid-point of the separation zone and the outwardly and downwardly extending skirt disposed on the mid-portion of the central hollow tube that limits air flow below the skirt. In other words, it is this placement of the inlet in the air separation zone at the level of the screen and the solid inclined skirt that keeps the circulating air above the skirt allowing dirt to be collected in the collection zone and not become reentrained in the airflow exiting the device.

The prefilter in Hitzelberger does not have the same function as the skirt as claimed. Here, Applicants' skirt limits air movement below the skirt. In Hitzelberger, the airstream reaches the bottom of the dust container before it changes direction and moves upwardly through the holes of the prefilter.

In view of this, Hitzelberger does not disclose or suggest a air separation and dirt collection device having an outwardly and downwardly extending skirt disposed on the mid-portion of the tube with the lower portion being impervious to the passage of air as claimed. Accordingly, Hitzelberger does not disclose each and every claim element of the claimed invention as required to sustain a rejection under § 102(e). Thus, Applicants respectfully submit that the rejection under 35 U.S.C. § 102 (e) is not well founded and should be withdrawn.

**Rejection Based On McCormick Under 35 U.S.C. § 102(e)**

The Examiner rejected Claims 1-3, 5-9 and 10 under 35 U.S.C. § 102 (e) as being anticipated by U.S. Patent No. 7,070,636 to McCormick et al. ("McCormick"). Applicants respectfully traverse this rejection for the following reasons.

For a rejection to be sustained under 35 U.S.C. § 102 (e) each and every element of the claimed invention must be disclosed in the single cited prior art reference. In this case, McCormick discloses a cyclonic vacuum cleaner with filter and filter sweeper. An air inlet at the top of the dust container directs the air to tangentially flow in a cyclonic path around a prefilter to the bottom of the container. At this time, the airstream is drawn through a filter screen into an intake channel and is drawn upwardly through a primary filter and then into a discharge chamber and redirected downwardly through an exhaust conduit. See McCormick at Column 6 lines 27-

41 and Column 7, lines 22-32.

As emphasized above, Applicants disclose an air separation device with a central hollow tube that extends the full length of the container having an outwardly and downwardly extending skirt disposed on the mid-portion of the tube. The lower portion of the device is impervious to the passage of air so that air entering the middle of the upper separation zone is opposite the screen on the central hollow tube. The placement of the inlet in the air separation region at the level of the screen and the inclined skirt keeps the circulating air in the air separation and dirt collection device above the skirt. This is in marked contrast to McCormick who (as Hitzelberger) select a configuration with the inlet at the top of the dirt cup and allow the air moving in cyclonic fashion reach to the bottom of the container.

In McCormick, the inlet is at the top of the container and travels to the bottom in a spiral fashion before the airstream changes direction and moves upwardly towards the filter screen. In contrast, Applicants' inlet enter the air separation and dirt collection device at the level of the screen so it is easily draw into the central column without flowing to the bottom. Accordingly, McCormick also does not show applicants dirt cup and actually teaches away from the device as claimed by Applicants. Thus, absent a teaching of each and every claim element, the rejection under § 102(e) is not well founded. As a result, Applicants respectfully submit that the rejection under 35 U.S.C. § 102 (e) be reconsidered and withdrawn.

**Rejection Based On Hitzelberger Or McCormick Taken Together with Nakai Under 35 U.S.C. § 103 (a)**

The Examiner rejected Claim 4 under 35 U.S.C. § 103 (a) as being unpatentable over either U.S. Published Application No. 2004/0010885 to Hitzelberger et al. ("Hitzelberger") or U.S. Patent No. 7,070,636 to McCormick et al. ("McCormick") taken together with U.S. Patent No. 7,014,675 to Nakai et al. ("Nakai"). Applicants respectfully traverse this rejection for the following reasons.

The Examiner has conceded that both Hitzelberger and McCormick do not disclose that the dirt collection device has a bottom that is hinged to the sidewall and selectively openable for

the removal of dirt collected thereon. The Examiner then refers to Nakai to cure this deficiency. Accordingly, the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention to provide Hitzelberger and McCormick with a bottom that is hinged to the sidewall and selectively openable for the easy removal of dirt collected thereon, as specifically taught by Nakai. Applicants respectfully disagree.

In order to establish obviousness of a claimed invention, all elements of the claims must be disclosed, taught or suggested by the prior art. Since all of the claims teach for placement of the inlet opposite the open portion of the central column and the downward sloping skirt, none of the references teach Applicants' device as claimed.

Applicants agree with the Examiner that Hitzelberger and McCormick do not disclose that the dirt collection device has a bottom that is hinged to the sidewall and selectively openable for the removal of dirt collected thereon. The limited teachings Hitzelberger and McCormick are discussed above with respect to the Section 102 rejection. For the reasons stated above, neither reference alone or a combination are effective under Section 103 as applied to Claims 1-3 and 5-10 as well as Claim 4.

Nakai does not add anything as they also feed inlet air into the top of the dirt cup and do not include a skirt. Nakai discloses a bottom that is hinged to the sidewall and selectively openable for the easy removal of dirt collected thereon. However, Nakai does not disclose or suggest a dirt container with an inlet in the mid-point of the separation zone and an outwardly and downwardly extending skirt disposed on the mid-portion of the tube as set forth in Claim 4 and new Claim 17.

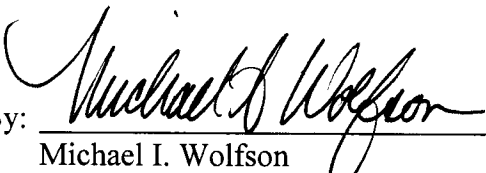
For these reasons, Applicants respectfully submit that the claimed air separation and dirt collection device is not obvious over the teaching of Hitzelberger or McCormick taken together with Nakai. In addition, one skilled in the art would find nothing in Hitzelberger, McCormick or Nakai alone or in combination that would disclose, teach or suggest the claimed composition or any reason for making it. This is because there is no motivation taught in any of the references to combine the references in such a way to provide the dirt cup as claimed. As stated above, all teach way from the claimed construction as all the references teach cyclonic action throughout

the full height of the container whereas applicants limit air movement to the region above the skirt.. Accordingly, Applicants respectfully submit that the rejection under 35 U.S.C. § 103 (a) is not well supported and should be withdrawn.

Applicants respectfully submit that in view of the amendments presented herewith the above remarks that Claims 1-10 and 17-18, all the claims under review are in condition for allowance. Accordingly, the Examiner is respectfully requested to consider the application at an early date with a view towards issuing a favorable action thereon. If upon review of the application, the Examiner is unable to issue an immediate Notice of Allowance, the Examiner is requested to telephone the undersigned attorney with a view towards resolving any outstanding issues.

Early and favorable action in connection with this application is earnestly solicited.

Respectfully submitted,

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